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S/844/62/000/000/091/129
D204/D307

AUTHORS: Slovkhotova, N. A., Koritskiy, A. T., Buben, N. Ya.,
Bibikov, V. V. and Rudnaya, G. V.

TITLE: The action of fast electrons on polyethylene at low temperatures

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 531-535

TEXT: The aim of this work was to determine whether the double bonds found in irradiated polyethylene (PE) form directly during irradiation, or whether they arise from secondary radical interactions. Low- and high-pressure PE was irradiated with 1.6 Mev electrons, in liquid or gaseous N₂, and the specimens were examined by ir spectroscopy. Trans-vinylene-type bonds formed when high-pressure PE was irradiated with a dose of 206 Mrad (966 cm⁻¹ band), both at -196 and +50°C, with similar energy yields, showing that

S/190/63/005/004/015/020
B101/B220

AUTHORS: Slovkhotova, N. A., Koritskiy, A. T., Kargin, V. A.,
Buben, N. Ya., Bibikov, V. V., Il'icheva, Z. F.,
Rudnaya, G. V.

TITLE: Effect of fast electrons on polyethylene at low temperatures.
I. Double bonds in irradiated polyethylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 568-574

TEXT: High-density polyethylene (PE), low-density PE, and PE obtained by radiation polymerization, were irradiated with 1.6 Mev electrons in liquid or gaseous N₂. The dose was varied from 25 to 300 Mrad. The IR spectra were studied from -196 to +50°C. The intensity of the 966 cm⁻¹ band proved to be independent of the nature of the PE and of the temperature. Hence it is concluded that the trans-vinylene bonds form in the primary irradiation act. On the contrary, the 909 cm⁻¹ band characteristic of vinyl bonds was with 200 Mrad and at -196°C six times as large and at -50°C only 2.5 times as large as in nonirradiated PE. With doses below 25 Mrad the initial concentration of vinyl groups decreased, whereas with
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Effect of fast electrons on....

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higher doses it increased. Thus irradiation induces the formation as well as the disappearance of vinyl double bonds, the disappearance being favored by higher temperatures. From the experimental fact that the N_{tv}/N_v ratio of the trans-vinylene to the vinyl groups is 18 for PE obtained by radiation polymerization, but 14 with high-density PE, it is assumed that the most probable process is a migration of energy and the formation of vinyl groups by the H atoms splitting off from two neighboring C atoms at the end of the molecular chain. There are 3 figures and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: October 11, 1961

Card 2/2

18(4)

AUTHORS:

Sharov, M. V., Bibikov, Ye. L.

SOV/165-58-4-17/47

TITLE:

Porosity in Magnesium Alloys (Poristost' v magniyevykh splavakh)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 4, pp 101 - 107 (USSR)

ABSTRACT:

Work was carried out by the aspirant Y .L.Bibikov under the scientific direction of M.V.Sharov, University **Docent**, Candidate of Technical Sciences. Magnesium-aluminum alloys with an aluminum content of 0, 3, 6 and 10% were examined. Two series of experiments were made: 1)After preparation, all alloys were degased by chlorine leaving only about 8 cm³ hydrogen per 100 g of metal. 2) The alloys were artificially saturated with hydrogen. The hydrogen content was increased up to 20 cm³/100 g of metal. The formation of porosity was investigated at relatively quick cooling and at relatively slow cooling. On the strength of the tests made, the following was

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Found: 1) There are two forms of porosity development:
a) "Nuclear" porosity, b) Porosity by gas contraction.
2) Porosity may show one of the forms mentioned with different degrees of development depending on the influence of three main factors: a) the degree of development of the volume crystallization, b) the intensity of gas liberation during crystallization, c) the speed at which the solid phase forming during crystallization is shifted. These factors may act in different combinations and with different intensity. The less the temperature gradient during crystallization of the cast piece and the greater the temperature of crystallization, the more the volume crystallization develops. Intensity of gas liberation depends on the quantity of gas liberated at an equilibrium during crystallization, and on the ability of the alloy to form oversaturated gas solutions in the metal with different degrees of oversaturation depending on cooling velocity. A shifting of the solid phase may occur if the specific weight of the

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solid phase is higher than that of the liquid phase.
3) "Nuclear" porosity forms due to a shift of the liquid alloy from top to bottom within the crystalline nucleus. The development of volume crystallization promotes the formation of the nucleus. A greater shift of the solid phase leads to a reduced formation of "nuclear" porosity. 4) Porosity by gas contraction forms when gas is liberated during the hardening of the alloy. This kind of porosity cannot occur if hardening is isothermal. There are 3 figures and 1 Soviet reference.

ASSOCIATION: Moskovskiy aviatsionnyy tekhnologicheskii institut (Moscow Aviation Technological Institute)
SUBMITTED: November 20, 1957

Card 3/3

4/12/51
MIRNOC, Ye.L., Cand Tech Sci — "Study of conditions of formation and development of microporosity in ^{aluminum alloy} castings." ~~aluminum alloy~~ castings."
Mos, 1950. 14 pp (Min of Higher Education USSR. ~~Scientific~~ Aviation Technological Inst), 150 copies (M, 27-28, 150)

— 22 —

PLAGE 1 EON EXPLOITATION

Kademya tank 502. Institut metallurgii

Isleivaniye splavov metallurgii: sbornik 2 (Proceedings of Scientific Metal Allays: Collection of Articles, Vol. 2, Moscow, Mashinostroyeniye, 1960, 204 p. Errata slip inserted. 2,800 copies printed.

Ed.: I.A. Odintsov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.S. Kuznetsov, Tech. Ed.: T.P. Poluektov; Editorial Board: A.A. Gurev, Academician, M.V. Gitis, Candidate of Technical Sciences (Copy Rep. Ed.); M.V. Zakharenko, Professor, Doctor of Technical Sciences; I.S. Kabanov, Candidate of Technical Sciences (Tech. Ed.); A.M. Kozlov, Doctor of Technical Sciences; V.V. Mal'nev, Professor, Doctor of Technical Sciences; and G.A. Gridasova, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for workers in scientific research institutes, metal and machine works for technical personnel, and for students attending schools of higher education.

CONTENTS: This is the second volume in a series of 4 for an extensive and complete allay prepared by the Institut metallurgii, Mashinostroyeniye, and the Ministry of Metallurgy, USSR. The first volume, "Isleivaniye splavov metallurgii: sbornik 1" (Proceedings of Scientific Metal Allays: Collection of Articles, Vol. 1, Moscow, Mashinostroyeniye, 1960, 204 p. Errata slip inserted. 2,800 copies printed.) was published in 1960. This volume contains 10 articles, 10 of which are devoted to the study of the effect of alloying elements on the properties of metal and the effect of alloying elements on the properties of metal. The articles are: 1. The effect of alloying elements on the properties of metal. 2. The effect of alloying elements on the properties of metal. 3. The effect of alloying elements on the properties of metal. 4. The effect of alloying elements on the properties of metal. 5. The effect of alloying elements on the properties of metal. 6. The effect of alloying elements on the properties of metal. 7. The effect of alloying elements on the properties of metal. 8. The effect of alloying elements on the properties of metal. 9. The effect of alloying elements on the properties of metal. 10. The effect of alloying elements on the properties of metal.

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18(4)
AUTHORS: Sharov, M. V., Bibikov, Ye. L. SOV/163-59-1-14/50
TITLE: Tendency of the Alloys of the System Mg-Al-Zn Toward Porosity Development (Sklonnost' splavov sistemy Mg-Al-Zn k razvitiyu poristosti)
PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 1, pp 63-67 (USSR)
ABSTRACT: This is a comparative study of the tendency of this system to develop micro-pores. Its dependence upon the composition of the alloy, the hydrogen content in the melt and the thermal conditions during the cooling of the cast are investigated. The procedure adopted in the experiments is described first. The following alloys were produced in an electric furnace: 1) Magnesium-aluminum alloys, with an aluminum content varying from zero to 10%. 2) Magnesium-zinc alloys with a zinc content varying from zero to 6% and 3) Magnesium-aluminum-zinc alloys, the aluminum content and the zinc content of which did not exceed 10% and 6%, respectively. The conditions during freezing were investigated. In conclusion the following is stated: The diagrams presented in this paper provide a means of determining the tendency of Mg-Al-Zn alloys to

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Tendency of the Alloys of the System Mg-Al-Zn
Toward Porosity Development

SOV/163-59-1-14/50

develop porosity as a function of the alloy composition and the technological conditions during casting. The influence of the latter can easily be determined from formula (2). The hydrogen dissolved in the metal exercises a decisive influence upon the development of porosity during casting, if $K < 0.4$, where K denotes a critical number determining the character of freezing, being proportional to $\frac{\Delta t}{I_t}$, Δt denoting the

temperature gradient in the cross-section of the cast, and I the temperature interval of crystallization of the melt (both given in $^{\circ}\text{C}$). Among the alloys used in industry that with an aluminium content of 9% and a zinc content of 2% proved to be the worst, at a value of $K \geq 0.4$, whereas the M1-5 alloy and the magnesium alloy with 5% of zinc are rather good. If freezing proceeds at a value of $K < 0.4$ the M1-5 alloy does not show any tendency towards porosity at a low hydrogen content. If, however, the hydrogen content rises above $20 \text{ cm}^3/100 \text{ g}$ of metal this alloy turns out to be the worst. It is, therefore, necessary to use melts with a low hydrogen

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Tendency of the Alloys of the System Mg-Al-Zn
Toward Porosity Development

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content in order to obtain high-quality casts. Under cooling conditions characterized by $K < 0.4$ the alloy M1-4 is the worst. There are 2 figures and 4 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy aviatsionnyy tekhnologicheskii institut (Moscow Aviation Technology Institute)

SUBMITTED: January 23, 1958

Card 3/3

Bibi Kov, Yel

PHASE I BOOK UTILIZATION 30/1/83

Doroshenko, V.S. *Problems of Shrinkage Processes in Metals*, Transactions of the Third Conference on the Theory of Casting Processes, Moscow, M. SSSR, 1960, 261 p. Extra ship material. 3,000 copies printed. Sponsoring Agency: Akademiya nauk SSSR, Institut mashinostroyeniya. Komisitsiya po tekhnologii mashinostroyeniya.

Ed.: B. B. Gulyayev, Doctor of Technical Sciences, Professor; M. I. Puchinskaya, V.S. Babitskiy, Tech. Ed.; V.Y. Polyakova.

PREFACE: This collection of articles is intended for scientific workers, engineers, technicians of scientific research institutes and industrial plants, and for faculty members of schools of higher education.

CONTENTS: The collection contains technical papers presented at the Third Conference on the Theory of Casting Processes, organized by the Institute of Casting Processes of the Academy of Sciences (USSR) and by the Institute of Metallurgy (USSR). The most serious defects in castings, ingots, and welds as a result of shrinkage are reviewed. Factors contributing to the formation of shrinkage cavities, porosity, cracks, fissures, distortion, and internal stresses are analyzed along with measures taken to prevent and remedy them. The hydrostatic pressure of molten metals and the process of solidification of metals are discussed. Also presented are resolutions adopted at the Conference with regard to the problems of shrinkage in metals. No personalities are mentioned, and the papers are accompanied by bibliographic references, the majority of which are Soviet.

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Gulyayev, B.B. The Problems of Shrinkage Processes in Metals

I. SHRINKAGE CAVITIES

Vorobeychikov, G.M., and B.B. Gulyayev. Influence of Solidification Conditions on the Formation of Shrinkage Cavities in Steel Castings

Leifer, L.M. Casting Properties of Heat-Resistant Alloys

Kocherzhevsky, M.I., and G.B. Shpilov. Experimental Investigation of Shrinkage Phenomena in Iron Castings With Spheroidal Graphite

Il'yev, K.B. Molten Metal and Alloy Shrinkage and Its Determination

II. SHRINKAGE POROSITY

Polozov, L.M., and B.B. Gulyayev. Axial Shrinkage Porosity in Walls of Steel Castings

Plavskiy, V.I., and Ye.F. Kozolova. Investigation of Shrinkage Porosity in Steel Castings

Polozov, L.M., and A.A. Podinov. Investigation of the Effect of Pressure on the Development of Defects in Hardfaced Alloy Castings

Al'tov, M.B. On the Increase in the Density of Aluminum Alloy Castings

Shchegolev, A.L., and Ye.L. Bibikov. Porosity in Castings of Alloys of the Magnesium-Aluminum System

III. CRACKS IN CASTINGS AND WELDED JOINTS

Tronitskiy, M.A. Effect of Some Metallurgical and Manufacturing Factors on the Formation of Hot Cracks in Steel Castings

Gogolin, M.A. On Hot Cracks in Castings

Bogoroditskiy, A.L., and V.Y. Blinov. Study of Causes of Subsurface Pressure Variation in High-Alloy Steel Ingots

Rutov, V.S. Shrinkage Phenomena in Continuous Steel Ingots

Serdyukov, A.A. The Connection Between the Cooling Regime of a Continuous Ingot and the Formation of Cracks and Fissures

Card 4/6

BIRIKOV, YE. I. and STAROV, N. V.

"The Influence of the Temperature of the Mold on the Formation of Porosity in Castings of Magnesium Alloys"

report presented at the 7th Conference on the Interaction of the Casting Mold and the Casting, sponsored by the Inst. of Mechanical Engineering, Acad. Sci. USSR, 25-28 January 1961.

S/840/62/000/000/002/003
E021/E435

AUTHORS: Sharov, M.V., Bibikov, Ye.L.
TITLE: The influence of the intensity of cooling and other factors on the formation of porosity magnesium alloy castings

SOURCE: Vzaimodeystviye liteynoy formy i otlivki.
Inst. mashinoved. AN SSSR. Ed. by B.B.Gulyayev.
Moscow, Izd-vo AN SSSR, 1962, 269-277

TEXT: Magnesium-zinc alloys with up to 10% aluminium and 6% zinc were cast into moulds pre-heated to 50, 200, 350 and 500°C. The drop in temperature from top to bottom of a casting during solidification was much less for the moulds pre-heated to 350 or 500°C than for those heated to 50 and 200°C (2 to 20°C and 79 to 112°C respectively). The solidification time increased and the rate of cooling decreased with increase in mould temperature. Radiographs showed that all castings cooled at a rate of more than 15 to 20 °/min (mould temperatures 50 and 200°C) had porosity in the upper regions. Increasing the hydrogen content from 8 to 22 cm³/100 g metal had no effect on porosity. The depth of porosity increased with

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The influence of the intensity ...

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increasing solidification range of the alloy and decreasing temperature gradient across the casting section.
Conclusions: Under the given conditions, porosity free magnesium-aluminium alloys could be obtained whereas magnesium-zinc alloys contained porosities. This is attributed to differences in the migration of the solid phases which in turn depends on differences in the specific weight ratio of the solid and the liquid phases. If the hydrogen content exceeded its solubility in the solid state (20 to 22 cm³/100 g), gas evolution occurred during solidification and this could result in porosity. The hydrogen content could be lowered by degassing with chlorine, helium or argon. There are 6 figures and 1 table.

Card 2/2

ACCESSION NR: AT3011984

S/2536/63/000/056/0019/0027

AUTHOR: Bibikov, Ye. L. (Candidate of technical sciences)

TITLE: The effect of titanium and beryllium on the properties of AL9 alloy

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy*, no. 56, 1963, 19-27

TOPIC TAGS: alloy, AL9 alloy, titanium, beryllium, porosity, aftercharge, annealing, aging, microstructure, Al, Cu, Mg, Fe, TiAl₃, silumin, Be, grain

ABSTRACT: Alloy AL9 was prepared from ingot aluminum AB000, silumin Sil-0, and an aluminum-magnesium alloy containing 10% Mg, in a graphite crucible set in an electric furnace. The alloy contained 6.9-7.1% silicon, 0.3-0.4% magnesium, and 0.18-0.42% iron, the balance being aluminum. The titanium was introduced as an aluminum-titanium alloy, in amounts calculated to make up 0.1-0.4% of Ti in the AL9 alloy. The samples were annealed for 12 hours at 535C and subjected to microscopical examination. A crystalline titanium component was found in the form of needles and plates, the size of which increased with the percentage of titanium, while the size of the grains of the alloy containing 0.2% titanium was drastically

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reduced from 5 mm to 0.1 mm in diameter. The yield strength of the alloy reached a maximum of 2.0 kg/mm^2 at a titanium content of 0.1%, while an increase in iron content from 0.2% to 0.4% reduced the yield strength by 1.5 kg/mm^2 . The beryllium was introduced into alloy AL9 in the form of an Al-Be alloy, amounting to 0.05-0.6%. The aftercharge of 0.6% beryllium reduced the size of the granules and caused the beta-phase of the alloy (Fe, Si-Al) to crystallize into compact cruciform structures, increasing its yield-strength by 3 kg/mm^2 . Orig. art. has: 12 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

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ENCL: 00

SUB CODE: ML

NO REF SOV: 006

OTHER: 002

Card 2/2

NIKITINA, M.F., kand. tekhn. nauk; BIBIKOV, Ye.L., kand. tekhn. nauk

Using sand-bentonite mixtures in manufacturing molds for
founding Al-Si alloys. Trudy MATI no.56:86-97 '63.
(MIRA 16:6)

(Sand, Foundry—Additives)
(Molding(Founding))

BIBIKOV, Yo.I., kand. tekhn. nauk; IZVOROV, Yu.M., inzh.

Effect of beryllium and magnesium additions on the properties of
an Al + 7% Si alloy. Trudy MATI no. 63:86-23 '65.

(MIRA 12:30)

L 29685-66 EWI(1)/EWI(m)/I/EWP(w)/EWP(t)/ETI IJP(c) JH/JD/JG
ACC NR: AT6011850 (N) SOURCE CODE: UR/2536/65/000/063/0086/0093

AUTHORS: Bibikov, Ye. L. (Candidate of technical sciences); Leybov, Yu. M. (Engineer)
B+/52

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskii institut)

TITLE: Influence of beryllium and magnesium additives on the properties of Al + 7% Si alloy
27 27

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy, no. 63, 1965.
Proizvodstvo otlivok iz legkikh splavov (Production of Castings from light alloys), 86-93

TOPIC TAGS: metal property, solid mechanical property,
aluminum alloy, silicon alloy, magnesium, beryllium iron/ AL9 aluminum alloy

ABSTRACT: The effect of the addition of Mg, Be, and Fe to Al¹ + 7% Si alloy on the mechanical properties of the alloy was determined. The Mg content varied from 0 to 0.6%, the Be content from 0 to 1.0%, and Fe was added in two different quantities only, viz.: 0.2 and 0.5%. The usual mechanical properties, e.g., strength limit, percent elongation, hardness, etc, were determined as a function of alloy composition and annealing temperature. The experimental results are shown graphically (see Fig.1). It was found that the addition of Mg and Be, up to 0.6 and 1% respectively, to Al-Si alloys improves their mechanical and structural properties.

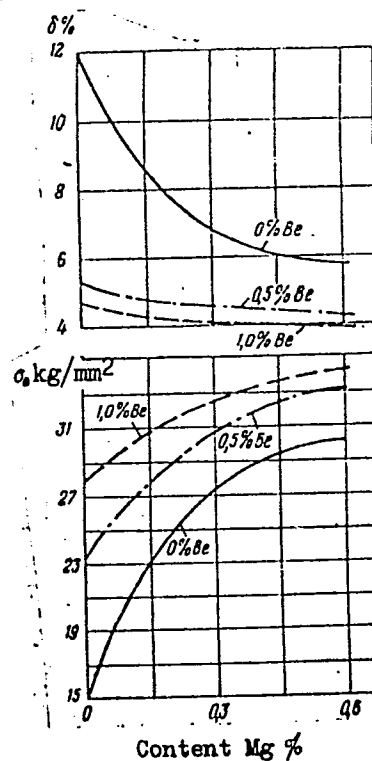
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UDC: 669-18:669.715:001.5

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ACC NR: AT6011850

Fig. 1. Influence of magnesium and beryllium on the mechanical properties of the alloy Al + 7% Si + 0.2% Fe.



Orig. art. has: 7 figures.

SUB CODE: 11,20/SUBM DATE: none/ ORIG REF: 002

Card 2/2 *cc*

BIBIKOV, Ye. S.

"Investigation of Electromagnetic Processes in a Dynamo-Electric Transmission With a Double Magnetic System in Application to Agricultural Tractors." Cand Tech Sci, Ural Polytechnic Inst imeni S. M. Kirov, Min Higher Education USSR, Sverdlovsk, 1954. (EL, No 4, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

BIBIKOV, S.

U S S R .

621.333 : 621.335.53

1630. Investigation of a dynamo-electric transmission with a common double magnet system, S. P. LEBEDEV AND E. S. BIBIKOV, *Elektricheskoe*, 1954, No. 12, 32-7, In Russian.

The problem of providing a stepless transmission for half-track vehicles, particularly for agricultural tractors, is considered. The Chelyabinsk Institute for Mechanization of Agriculture developed an original design of such a continuous transmission based on a combination of a d.c. generator and motor in a common frame or casing and magnetic circuit. The armature of the motor is cylindrical and hollow and outside the common "yoke," the generator armature inside it. Correspondingly, the two stators are inside each other, but for mechanical reasons the motor shaft is full and inside the hollow generator shaft. Obviously the common magnetic system has outside and inside poles. The theory of this unit shows that the stability of the operation and self-regulation of the generator-motor unit is assured by a hyperbolic relation between load current and flux of the generator. This leads to an approximately inverse proportionality between the variations of e.m.f. and terminal voltage of the generator, and load current. The mutual interpenetration of generator and motor fluxes produced by the common magnet system was studied. The authors show that these phenomena may be analysed with a satisfactory accuracy by a graphical

Lebedev

method. In the experimental investigation it was found that the required operating conditions could be produced by changing from self-excitation to independent excitation of the generator.

B. F. KRAUS

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BIBIKOV, Ye.S., kand.tekhn.nauk; KUNIN, N.F., prof. doktor fiziko-
matematicheskikh nauk, red.

[First artificial earth satellite] Pervye iskusstvennyye sputniki
zemli. Pod red. N.F.Kunina. Cheliabinsk, Cheliabinskoe obl.
otd-nie Ob-va po rasprostraneniю polit. i nauchn. znaniy RSFSR,
1957. 27 p. (MIRA 11:4)
(Artificial satellites)

SOV-26-58-3-17/51

AUTHOR: ~~Ribikov, Y. G.~~ Candidate of Technical Sciences; Kudryavtsev, A.S., (Chelyabinsk)

TITLE: The Formation of an Electric Charge on a Living Body (Obrazovaniye elektricheskogo zaryada na zhivom organizme)

PERIODICAL: Priroda, 1958, Nr 3, pp 79-80 (USSR)

ABSTRACT: The Chair of electrotechnics of the Chelyabinsk institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (Chelyabinsk Institute of Mechanization and Electrification of Agriculture) was asked by the head of one workshop of the Chelyabinsk chasovoy zavod (Chelyabinsk Watch Factory) to explain phenomena of electrification of workers when handing over metal working pieces to each other (static electricity). An explanation of this phenomenon based on relevant studies by the physiologist N. Ye. Vvedenskiy are given.

1. Electrostatic generation--Analysis

Card 1/1

1. Institut fiziologii im. I.P. Pavlova (for Gershuni).

SIZOV, G., kand. tekhn. nauk; BIBIKOV, Yu., inzh.

Heat conditions on tank vessels. Rech. transp. 22 no.9:
35-37 S '63. (MIRA 16:10)

BIBIKOV, Yu.A. [Bibikau, IU.A.]

Raising *Schisandra chinensis* Baill. from woody cuttings. Vestsi
AN BSSR. Ser. bial. nav. no.1:67-70 '59. (MIRA 12:7)
(*Schisandra*) (Plant cuttings)

BIBIKOV, Yu.A. [Bibikau, IU.A.]

Propagation of woody climbing plants by green cuttings. Vestsi.
AN BSSR.Ser.bial.nav. no.4:51-60 '59. (MIRA 13:4)
(Climbing plants) (Plant cuttings)

NESTEROVICH, M.D. [Nestsjarovich, M.D.], akademik; BIBIKOV, Yu.A.
[Bibikan, IU.A.]

Propagation of certain species of vines by winter cuttings.
Vestsi AN BSSSR. Ser.bial.nav. no.1:20-31 '60. (MIRA 13:6)

1. AN BSSR (for Nesterovich).
(PLANT PROPAGATION) (CLIMBING PLANTS)

BIBINOV, Yu.A.

Cultivation of Actinidia polygama in the White Russian S.S.R.
Sbor. nauch. rab. TSS no.1:30-33 '60. (MIR 14:10)
(White Russia--Silver vine)

BIBIKOV, Yu.A. [Bibikau, IU.A.]

Seasonal rhythm of growth in some lianes. Vestsi AN BSSR. Ser.
bital. nav. no. 4:42-53 '60. (MIRA 14:1)
(White Russia--Climbing plants)
(Growth (Plants))

BIBIKOV, Yu.A.

Fundamental results of the introduction of climbing woody plants
in the White Russian S.S.R. Sbor. nauch. rab. TSBS no.2:39-47
'61. (MIRA 15:7)
(White Russia—Climbing plants) (Plant introduction)

VAKULA, V.S. [Vakula, U.S.]; BIBIKOV, Yu.A. [Bibikau, IU.A.]

Vegetative reproduction of the ornamental and exotic forms
of woody plants. Vestsi AN ESSR. Ser. bial. nav. no.1:
33-41 '64. (MIRA 17:6)

NESTEROVICH, M.D. [Nestorovich, M.D.]; BIBIKOV, Yu.A. [Bibikov, Yu.A.]

Flowering and fruiting of introduced lianas in the White Russian
S.S.R. Vestsi AN BSSR. Ser. biol. nauk: no.2:5-15 '64.
(MIRA 17:11)

BIBIKOV, Yuri
BIBIKOV, Yuriy Konstantinovich; MALYSHKIN, Viktor Fedoseyevich; SHALAYEVA,
~~Yekaterina Ivanovna~~; KOPYLOVA, L.P., red.; KIRSANOVA, N.A., tekhn.
red.

[Trade unions in Petrograd before the Great October Socialist
Revolution, 1907-1917; pages from the history of the trade union
movement in the U.S.S.R.] Profsoiuzy Petrograda do Velikoi Oktiabr'-
skoi sotsialisticheskoi revoliutsii (1907-1917 gody); iz istorii
profsoiuznogo dvizheniia v SSSR. [Moskva] Izd-vo VTsSPS, 1957. 128 p.
(Leningrad--Trade unions) (MIRA 11:2)

BIBIKOV, Yuriy Konstantinovich; MOSKALEV, Stanislav Nikolayevich

[Trade unions in Leningrad during the Soviet regime, 1917-1959]
Profsoiuzy Leningrada v gody sovetsskoi vlasti, 1917-1959. Moskva,
Profizdat, 1960. 189 p. (MIRA 14:10)
(Leningrad—Trade unions)

29030
S/043/61/000/004/008/008
D274/D302

16.3400
AUTHOR:

Bibikov, Yu.N.

TITLE:

On stability "in the large" of the zero solution of
a system of two differential equations

PERIODICAL:

Leningrad. Universitet. Vestnik. Seriya matematiki,
mekhaniki i astronomii, no. 4, 1961, 156 - 161

TEXT: The system

$$\left. \begin{aligned} \frac{dx}{dt} &= ax + f_2(y) \\ \frac{dy}{dt} &= f_1(x) + by \end{aligned} \right\} \quad (1)$$

with two nonlinearities is considered. It is assumed that: a) The
right-hand sides of (1) vanish at the origin of coordinates and sa-
tisfy the conditions for existence and uniqueness of solutions with
any initial values, (the results obtained remain valid even without
the uniqueness requirement); b) The generalized Hurwitz conditions

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are satisfied, viz.

$$a + b < 0 \quad (2)$$

$$ab - h_1(x) h_2(y) > 0, \quad (3)$$

where

$$h_i(z) = \frac{f_i(z)}{z} \quad (z \neq 0) \quad i = 1, 2.$$

The question is considered to what extent the satisfaction of conditions (2) and (3) ensures the stability "in the large" of the solution $x = y = 0$ of system (1), if $f_1(x)$ and $f_2(x)$ are not linear functions. This problem was considered by N.N. Krasovskiy (Ref. 1: Ob ustoychivosti resheniy sistemy dvukh differentsial'nykh uravneniy. PMM, 17, 6, 1953). Two lemmas are stated. Lemma 1: If each positive half-trajectory of (1) is bounded, then the solution $x = y = 0$ is stable in the large. Lemma 2: involves the functions $h_1(x)$ and $h_2(y)$. The following theorem is proved. Theorem 1: If $ab > 0$, conditions (2) and (3) are satisfied, and the functions h_1 and h_2 change sign, then the zero solution of system (1) is stable in the

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large. Thereupon, Theorem 2 is stated: If $ab \neq 0$, then the fulfillment of the generalized Hurwitz conditions is sufficient for the stability in the large of the zero solution of system (1). Further, the case $ab = 0$ is considered. Assume $b = 0$. Thereupon, system (1) becomes

$$\dot{x} = ax + f_2(y), \quad (1')$$

$$\dot{y} = f_1(x),$$

where

$$a < 0 \quad (2')$$

$$h_1(x) h_2(y) < 0. \quad (3')$$

In Ref. 1 (Op.cit.) it is shown that if $\int_0^y f_2(y) dy \rightarrow \infty$ for $|y| \rightarrow$

$\rightarrow \infty$, then the fulfillment of (2') and (3') is sufficient for the stability of the zero solution of (1'). Theorem 3: If the integral

$\int_{x_0}^{\infty} h_1(x) dx$ converges and conditions (2') and (3') are satisfied,

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then the zero solution of (1') is stable in the large. Theorem 3 is proved. Corollary: If conditions (2') and (3') are satisfied and the conditions of Osgood's uniqueness-theorem hold at the origin of coordinates, then the zero solution of system (1') is stable in the large. There are 3 figures and 4 Soviet-bloc references. 41

Card 4/4

L 10016-87 WWT(d) IUP(c)
ACC NR: AP6036020 SOURCE CODE: UR/0376/66/002/010/1279/1288
16

AUTHOR: Bibikov, Yu. N.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: On the global stability of solutions of a system of second-order differential equations

SOURCE: Differentsial'nyye uravneniya, v. 2, no. 10, 1966, 1279-1288

TOPIC TAGS: solution global stability, zero solution, global stability, second order differential equation, differential equation system

ABSTRACT: The global stability of solutions of the system.

$$\frac{dx}{dt} = ax + h_1(x, y, t)y,$$

$$\frac{dy}{dt} = h_1(x, y, t)x + by,$$

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UDC: 517.919

L 10016-67

ACC NR: AP6036020

where a and b are certain constants, $h_1(x, y, t)$ and $h_2(x, y, t)$ are continuous functions with respect to their arguments, and terms with h_1 and h_2 functions tend to zero when $x, y \rightarrow 0$ is studied under the assumption that system (1) satisfies the generalized Routh-Hurwitz criterion. By constructing a spiral composed of smooth curves and analyzing its points of intersection with the trajectories of solutions in the direction of the origin of coordinates, the sufficient conditions for the global stability of the zero solution of system (1) are derived in the form of certain inequalities in terms of a , b and h_1 , h_2 . Simplified global stability conditions are derived for particular cases of system (1). On the basis of the global stability conditions for zero solution, the sufficient conditions for the convergence of solutions of dissipative systems (systems without zero solutions) when $t \rightarrow \infty$ is derived. Orig. art. has: 26 formulas.

SUB CODE: 12/ SUBM DATE: 26Nov65/ ORIG REF: 007/ OTH REF: 001/
ATD PRESS: 5105

Card 212 *5/70*

BIBIKOV, Yu.N.

Study of a dissipative system of the second order. Vest. LGU.
18 no.19:14-26 '63. (MIRA 16:11)

BIBIKOV, Yu. N. (Leningrad)

"On the stability in the whole of forced vibrations of a second order system"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 1964.

ACCESSION NR: AP4018859

S/0043/64/000/001/0015/0025

AUTHOR: Bibikov, Yu. N.

TITLE: Convergence in second-order dissipative systems

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1964, 15-25

TOPIC TAGS: dissipative system, second order dissipative system, convergence, dissipative system convergence, differential equation, Cartwright Littlewood equation, Hurwitz condition

ABSTRACT: The author considers the system of two equations:

$$\begin{aligned} \frac{dx}{dt} &= ax + f_1(y) + P(t), \\ \frac{dy}{dt} &= f_2(x) + by + Q(t), \end{aligned} \quad (1)$$

in which the functions $f_1(x)$ and $f_2(y)$ are continuously differentiable, and the functions $P(t)$ and $Q(t)$ are continuous and bounded. This system was studied in an earlier paper by the

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ACCESSION NR: AP4918859

same author under the assumptions:

$$\begin{aligned} a + b &< 0, \\ \alpha - \frac{f_1(x)f_1(y)}{x} &> \alpha(x) + \alpha(y). \end{aligned} \quad (2)$$

when $|x| \geq \bar{a}$ and $|y| \geq \bar{b}$, where $\bar{a}$ and $\bar{b}$ are positive constants and $\alpha(x)$ is a positive function such that:

$$\lim_{x \rightarrow \infty} \alpha(x) = \infty. \quad (3)$$

For dissipative systems, if P and Q are periodic with period ω , then system (1) has a periodic solution of period ω . The stability in-the-large of such systems is of interest. Special cases were considered in the earlier paper. A second system

$$\begin{aligned} \frac{dx}{dt} &= f_1(x) + \alpha y + P(x, y, t), \\ \frac{dy}{dt} &= b x + f_2(y) + Q(x, y, t). \end{aligned} \quad (4)$$

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ACCESSION NR: AP4018859

differing from (1) only in that the nonlinearities are situated along the main diagonal, is also investigated. Sufficient conditions for the convergence of all solutions to the periodic one are derived for both systems (1) and (4). An example of the use of the method presented is given, using the Cartwright-Littlewood equation:

$$\frac{dx}{dt} + N(x) \frac{dx}{dt} + K(x) = P(t).$$

(5)

Orig. art. has: 4 figures and numerous equations.

ASSOCIATION: None

SUBMITTED: 07Jul62

DATE ACQ: 23Mar64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 003

3/3

Card

BIBIKOV, Yu.S., inzh.

Oil pressure relay has now a longer service life. Elek. i tepl.tiaga
6 no.8:27 Ag '62. (MIRA 17:3)

1. Otdel glavnogo konstruktora Muromskogo zavoda im. F.E.
Dzherzhinskogo.

BIBIKOV, Yu.S.

Factory modernization of the TGM1 switcher diesel locomotive. Elek.
i tepl.tiaga no.7:24-27 J1 '63. (MIRA 16:9)

1. Nachal'nik byuro teplovoznogo elektrooborudovaniya spetsial'nogo
konstruktorskogo byuro Muromskogo zavoda im. Dzerzhinskogo.
(Diesel Locomotives)

Bibikova, A.A.

POLYAK, M.A.; BIBIKOVA, A.A.; GUREVICH, M.I.

Studying the possibility of accelerating the vulcanization of
automobile inner tubes. Kauch.i rez. 16 no.5:30-32 My '57.
(MLRA 10:7)

1. Yaroslavskiy shinnyy zavod.
(Vulcanization) (Tires, Rubber)

BIBIKOV, Yuriy Stepanovich, inzh.; LEMTYUGOV, Vladimir Ivanovich,
inzh.; RUSAK, Aleksandr Matveyevich, inzh. [deceased];
SAVIN, Igor' Dmitriyevich, inzh.; TAGUNOV, Nikolay
Mikhaylovich, inzh.; FILATOV, Vyacheslav Ivanovich, inzh.;
KUZ'MIN, V.D., kand. tekhn. nauk, red.

[The TGM1 diesel locomotive] Teplovoz TGM1. Moskva, Trans-
port, 1965. 207 p. (MIRA 18:12)

1. Muromskiy zavod imeni F.E.Dzerzhinskogo (for all except
Kuz'min).

BIBIKOVA, A.F. (Moskva)

Demyelization of central nervous system fibres following total-body
ionizing irradiation of animals. Arkh.pat. 21 no.5:19-25 '59.
(MIRA 12:12)

1. Nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. N.A.
Krayevskiy.

(CENTRAL NERVOUS SYSTEM, eff. of radiation,
x-ray total-body irradiation inducing CNS demyelization
(Rus))

(ROENTGEN RAYS, eff.
total-body irradiation inducing CNS demyelization
(Rus))

[illegible]

BIBIKOVA, A.F.

Clinic al aspects of vascular aneurisms at the base of the brain
Zhur. nevr. i psikh. 52, no. 7, 1952

BIBIKOVA, A.F.

State of some innervation apparatus of the cardio-vascular system in experimental
hypertension
Zhur. nevr. i psikh. 52, no. 9, 1952

1. BIBIKOVA, A. F.
2. USSR (600)
4. Brain - Inflammation
7. Pathohistological changes in the central nervous system in the comatose type of encephalitis in children. Zhur. nevr. i psikh. 53, no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

1. SMIRNOV, V. A., BIBIKOVA, A. F.
2. USSR (600)
4. Chorea
7. Topic data on hemiballism. Arkhiv. anat. gist. i embr. 29, no. 2, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

ROBINSON, Ya.; BILIKOVA, A. F.; POPOVA, L. M.; VITINT, A. I.; TEREKHLENKOVA, L. L.

Poliomyelitis

Some characteristics of the histopathology of experimental poliomyelitis. Zhur. nevr. i psikh. 55, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

ROBINZON, I.A.; BIBIKOVA, A.F.; POPOVA, L.M.; VITING, A.I.; YUROVETSKAYA, A.L.

~~SECRET~~
Certain peculiarities of histopathology of experimental poliomyelitis.
Zh. nevropat. psikhiat., Moskva 53 no.3:225-231 Mar 1953. (CML 25:1)

1. Institute of Neurology of the Academy of Medical Sciences USSR.

USSR/Cultivated Plants - Feeders.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44143

Author : Bibikova, A.F.

Inst : Fruit and Berry Institute AS Uzbek SSR

Title : The Nutrient Conditions in the Culture of Perennial Grasses in Orchards.

Orig Pub : Tr. Vses.-yagod. in-ta AN USSR, 1956, vyp. 21, 101-112

Abstract : The experiments were carried out in 1951-1954 for the purpose of determining the negative of grasses on fruit trees. The variants of the experiment were as follows:
1 - sowing of grass mixtures (alfalfa, dew grass, Italian rye grass) without fertilizers. 2- sowing of identical mixtures with the yearly introduction of P. 3 - yearly introduction of P and N into the grass mixture.

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BIBIKOVA, A. F.

USSR/Cultivated Plants - Fruits. Berries.

M.

Abstr Jour : Ref Zhur - Biol., No 4. 1957, 15737

Author : A.F. Bibikova

Inst : Fruit and Berry Institute of the Academy of Sciences,
UzbekistanSSR.

Title : Sideration Sowing in Orchards on Irrigated Sierozem Soil.
(Posev sideratov v sadakh na polivnykh serozemnykh
pochvakh).

Orig Pub : Tr. Plod.-yagod. in-ta AN UzSSR, 1956, vyp. 21, 137-141.

Abstract : At the Fruit and Berry Institute of the Academy of
Sciences Uzbek SSR winter sideration crops (the Nicholson
pea) was sown yearly in the spaces between rows in the
garden in September and was plowed at the end of April
to the beginning of May. Phosphate fertilizers were
applied during plowing. The sowing of sideration crops

Card 1/2

BIBIKOVA, A.F.

Histological changes in the central nervous system under the general influence of large doses of gamma rays. Zhur.nevr.i psikh. 60 no.5: 529-534 '60. (MIRA 13:9)

1. Rukovoditel' - prof. N.A. Krayevskiy, Moskva.
(GAMMA RAYS--PHYSIOLOGICAL EFFECT) (NERVOUS SYSTEM)

LIBIKOVA, A.F.; PONOMAR'KOV, V.I.

Remote morphological changes in dogs following whole-body X irradiation. Radiobiologia 1 no.5:769-773 '61. (MIRA 14:11)
(X RAYS --PHYSIOLOGICAL EFFECT)

BIBIKOVA, A.F.

Late histopathological changes in the central nervous system after
total-body multiple X-irradiation of dogs. Biul. eksp. biol. i med.
51 no.3:106-110 Mr '61. (MIRA 14:5)

1. Predstavlena deystvitel'nym chlenom AMN SSSR N.A.Krayevskim.
(BRAIN) (RADIATION SICKNESS)

BIBIKOVA, A.F

PHASE I BOOK EXPLOITATION

SOV/6344

Alekseyeva, O. G., A. F. Bibikova, N. A. Vyalova, A. Ye. Ivanov, N. A. Krayevskiy, N. A. Kurshakov, N. V. Paramonova, V. N. Petushkov, V. V. Snegireva, L. A. Studenikina, Yu. M. Shtukkenberg, and A. Ya. Shulyatikova

Sluchay ostroy luchevoy bolezni u cheloveka (A Case of Acute Radiation Sickness in Man) Moscow, Medgiz, 1962. 149 p. 10,000 copies printed.

Ed. (Title page): N. A. Kurshakov, Corresponding Member Academy of Medical Sciences SSSR, Professor; Ed.: S. P. Landau-Tylkina; Tech. Ed.: N. A. Yakovlev.

PURPOSE: This monograph is intended for physicians and biologists.

COVERAGE: This book describes an actual case of acute radiation sickness in its severe form. It describes in detail clinical symptoms, changes in biochemical indexes, morphological changes in the nervous system, and the distribution of depth doses and energy absorption.

Card 1/3|

DYUBYUK, A.F.; BIBIKOVA, T.N.; TRUBNIKOV, B.M.

Some physical properties of orographic alto-cumulus lenticular clouds. Meteor. i gidrol. no.4:3-9 Ap '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet, fizicheskiy fakul'tet.
(Clouds)

BIBIKOVA, A.F.; BUSYGIN, V.Ye.; GRIGOR'YEV, Yu.G.; KALYAYEVA, T.V.;
LYUBIMOVA-GERASIMOVA, R.M.; TSYPIN, A.B.

Reaction of the organism to massive γ -irradiation. Pat.
fiziol. i eksp. terap. 6 no.4:57-62 J1-Ag '62. (MIRA 17:8)

L 31342-65 ENT(m) DIAAP

ACCESSION NR: AP5005523

6/0205/65/005/001/0072/0076

AUTHOR: Lebedinskiy, A. V. (Deceased); Nefedov, Yu. G.; Domshlak, M. P.; Ryzhov, N. I.; Darenskaya, N. G.; Bfbikova, A. F.; Ganshina, A. N.; Lebedev, B. I.

TITLE: The biological effects of fractional irradiation by 510-Mev protons on dogs

SOURCE: Radiobiologiya, v. 5, no. 1, 1965, 72-76

TOPIC TAGS: high energy proton, biological effect, dog

ABSTRACT: Little data has been published on the effect of high-energy protons on larger animals. It is theorized by the authors that the biological effectiveness of protons on larger animals would be more pronounced than on small animals. To test this theory, the authors investigated 12 dogs divided into two groups (6 dogs each) according to conditions of irradiation; the first group was irradiated 19 times over a period of 40 days with a total dose of 650 r. The second group was irradiated 8 times over a period of 15 days with a total dose of 690 r. The radiation doses in the first group ranged from 10 to 79 r and in the second group from 71 to 109 r. The experiments were conducted at the Joint Institute of Nuclear Research on the LYaP synchrocyclotron. The unit was arranged so that a 510-Mev proton beam hit a section 40 cm in diameter at 1 rad/sec. It was found that both

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groups exhibited functional and morphological symptoms of severe radiation sickness, typical of this type of radiation. In comparison with clinical data on the effects of x-rays, protons generally had the same effects. However, dogs irradiated with protons exhibited some symptoms peculiar to this radiation; the hemorrhagic syndrome was more pronounced, and, when death took place, there was a relatively higher leukocyte content in the peripheral blood and generally lower bone-marrow blood formation in the form of a somewhat greater depth of damage to cells of the erythroblastic system. An examination of the structures of the central nervous system revealed damage to neural and glial structures and disruption of blood and fluid circulation. Orig. art. has: 5 figures. [CD]

ASSOCIATION: none

SUBMITTED: 19Feb63

ENCL: 00

SUB CODE: LS

NO REF SOV: 003

OTHER: 007

ATD PRESS: 3201

Card 2/2

LEBEDINSKIY, A.V. [deceased]; NUFEDOV, Yu.G.; ROMSHIAK, M.P.; RYKOVA, N.I.;
DARFINSKAYA, N.G.; BIBIKOVA, A.F.; GANSHINA, A.N.; LERDEN, B.I.

Biological effect of 510 MEV protons in fractional irradiation.
Radiobiologiya 5 no.1:72-76 '65. (MIRA 18:3)

L 54613-65

ACCESSION NR: AP5010342

UR/0205/65/005/002/0221/0226

AUTHOR: Gorizontev, P. D.; Moroz, B. B.; Fedotov, V. P.; Bibikova, A. F.; Yevseyeva, N. K. ¹⁵₈

TITLE: Significance of neuroendocrine changes in remote effects resulting from ionizing radiation

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 221-226

TOPIC TAGS: animal, dog, radiation sickness, remote radiation effect, endocrinology, neuroendocrine system, hypophysis, adrenal gland, adrenal cortex, hypothalamus, deficiency disease, collagen, early aging, corticosteroid

ABSTRACT: Fifteen dogs who had recovered from acute radiation sickness resulting from gamma-neutron irradiation of 300 ber were investigated 3-5 yrs later to determine the state of the hypophysis and adrenal cortex system. Glucocorticoid and mineralocorticoid investigations of adrenal gland functions revealed that 12 of the 15 dogs had developed interrenal deficiency symptoms. Typical remote effects included nonuniform local damage of the adrenal glands which

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L 54643-65

ACCESSION NR: AP5010342

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appears to be related to selective damage of the synthetic processes in different areas of the adrenal cortex. In analyzing the mechanism of the hypofunctional state of the adrenal cortex, two possible explanations are offered: 1) hypophysis damage may affect the adrenal cortex by changes in the mechanisms regulating hormone formation, and 2) adrenal cortex deficiency may be the result of irradiated organism tissues using more corticosteroids. Morphological examinations disclosed considerable destructive changes in the neurosecretory nuclei of the hypothalamus which are generally associated with hypophysis changes. Functional activity disorders of the adrenal cortex and growth of collagen tissue in the nervous system are important factors in the genesis of early aging in irradiated animals. With hyperfunction of the hypophysis and adrenal cortex leading to atrophy of the internal organs and arteriosclerotic changes on one hand, and with hypofunction leading to trophic processes and early aging on the other, balancing of neuroendocrine system functions emerges as an important problem in remote radiation effect pathology. Orig. art. has: 5 figures.

ASSOCIATION: None.

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54643-65

ACCESSION NR: AP5010342

SUBMITTED: 26Sep63

ENCL: 00

SUB CODE: LS

NR REF SOV: 013

OTHER: 002

Card 3/3

BIBIKOVA, A.F.; LEBEDEV, B.I.

Morphological changes in the nervous system of dogs subjected
to high-energy proton action. Radiobiologiya 5 no.4:562-565 '65.
(MIRA 18:9)

GORIZONTOV, P.D.; MOROZ, B.B.; FEDOTOV, V.P.; BIBIKOVA, A.F.; YEVSEYEVA, N.h.

Significance of neuroendocrine changes in late aftereffects
caused by ionizing radiation. Radiobiologia 5 no.2:221-226
'65. (MIRA 18:12)

L 11275-07 EFT(1)/

ACC NR: AT6029633

SOURCE CODE: UR/0000/66/000/000/0242/929

AUTHOR: Lebedinskiy, A. V. (deceased); Nefedov, Yu. G.; Domshlak, M. P.; Klempanikaya, N. N.; Moskalov, Yu. I.; Ryzhov, N. I.; Daronskaya, N. G.; Bibikova, I. I.; Ganshina, N. I.; Lobedov, B. I.; Lvitsyna, G. M.; Shashkov, I. F.; Borbonova, N. I.; Gorasimova, G. K.

ORG: none

TITLE: Model investigations of cosmic radiation biologic effect

SOURCE: Voprosy obshchey radiobiologii (Problems of general radiobiology). Moscow, Atomizdat, 1966, 242-254

TOPIC TAGS: dog, rat, induced radiation effect, cosmic radiation biologic effect, proton radiation biologic effect, relative biologic efficiency

ABSTRACT: With space flights of longer duration, cosmic rays, radiation belts and solar flares present an increasing danger to astronauts. However, relatively little is known of the biologic effect of cosmic radiation and its components, particularly high energy protons. In the present study the RBE of high energy protons was compared in large laboratory animals (dogs) and small laboratory animals (rats) to determine possible RBE differences. In a series of experiments groups of dogs were irradiated with high energy protons and X-irradiation (or gamma irradiation) in fractional and

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ACC NR: AT6029633

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single doses of 250 to 650 rads; groups of rats (Wistar line) were also irradiated in fractional and single doses of 300 to 1200 rads. A synchrocyclotron was used for proton irradiation (510 Mev, field diameter 40 cm, dose rate of 1 rad/sec). Clinical symptoms, histological investigations, EEG data, mean survival periods, and post mortem examinations served as indices. Results show that with fractional dose irradiation of dogs, the RBE of proton irradiation (510 Mev) and X-irradiation (180 kv) is the same (1.0). With fractional irradiation of rats, the RBE of proton irradiation is 0.8. With single dose irradiation of dogs, the RBE of protons is 1.15 compared to gamma irradiation. With single dose irradiation of rats, the RBE of protons is 0.75 compared to gamma irradiation. No conclusions are drawn. Orig. art. has: 4 tables and 6 figures.

SUB CODE: 06/ SUEM DATE: 23Apr66/ ORIG REF: 004/ OTH REF: 004

Card 2/2 jb

BALASHOV, Yu.S.; BIBIKOVA, B.A.; MURZAKHMETOVA, K.; POLUNINA, O.A.

Feeding and disorders in the valvular function of the proventriculus in fleas. Med. paras.i paraz.bol. 34 no.4:471-476
Jl-Ag '65. (MIRA 18:12)

1. Zoologicheskiy institut AN SSSR i Sredne-Aziatskiy nauchno-issledovatel'skiy protivochumnyy institut. Submitted May 8, 1963.

BIBIKOVA, I., iskusstvoved.

With the Bogorodsk carvers. Prom.koop. 14 no.2:24-25
F '60. (MIRA 13:5)
(Bogorodsk--Wood carving)

BIBIKOVA, I., iskusstvoved

Plastics are waiting for artists. Mest.prom.i khud.promys. 1 no.2/3:
24-25 N-D '60. (MIRA 14:4)

(Plastics) (Art, Decorative)

~~BIBIKOVA, K.~~ [translator]; DEREVTSEV, S., spets. red.; KRIVINA, N., red.;
LUCHKIV, M., tekhn. red.

[Five hundred types of home baking; Hungarian cooking: pastries,
pies, tarts, creams, liqueurs, sandwiches, etc.] 500 vidov do-
mashnego pechen'ia; iz vengerskoi kukhni: pechen'e, pirogi, torty,
kremy, likery, buterbrody i.t.d. Uzhgorod, Zakarpatskoe obl.
knizhno-gazetnoe izd-vo, 1961. 254 p. (MIRA 14:9)
(Cookery, Hungarian)

BIBIKOVA, L.N., nauchnyy sotrudnik

Size of sheep raising sections on collective farms of the non-Chernozem zone. Zhivotnovodstvo 21 no.8:29-33 Ag '59. (MIRA 21:11)

1. Vsesoyuznyy institut zhivotnovodstva, otdel ekonomiki.
(Gorkiy Province--Sheep)

BIBIKOVA, L.Ya.

Production and use of herbicides in the USA. Zashch.rast. ot
vred. i bol. 9 no. 4:52-53 '64. (MIRA 17:5)

GAUZE, G. F.; KOCHETKOVA, G.V.; BIBIKOVA, N.V.

Study of mutants with oxidation deficiency in *Bacillus subtilis*.
Dokl. AN SSSR 155 no. 5:1184-1187 Ap '64. (MIRA 17:5)

1. Institut po izyskaniyu vykh antibiotikov AMN SSSR.
Predstavleno akademikom A.A. Ischenetkin.

TRENINA, G.A.; BIBIKOVA, M.V.; SARUKHANOVA, L.Ye.

Production of mutants with oxidation defect in various yeast species. Mikrobiologiya 34 no.2:300-304 Mr-Apr '65. (MIRA 18:6)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.

KOCHETKOVA, G.V.; KUDINOVA, M.K.; ZIMENKOVA, L.F.; BIBIKOVA, M.V.

Some physiological characteristics of Staphylococcus and
Bacterium paracoli mutants with an oxidation defect.

Mikrobiologiya 33 no.4:587-592 J1-Ag '64. (MIRA 18:3)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.

L 3158-66 EWT(1)/EWA(j)/EWA(b)-2 JK
 ACCESSION NR: AP5019329 UR/0020/64/155/005/1184/1187
 AUTHOR: Gauze, G. F.; Kochetkova, G. V.; Bibikova, M. V.
 TITLE: Investigation of mutants with an oxidation defect in Bacillus subtilis
 SOURCE: AN SSSR. Doklady, v. 155, no. 5, 1964, 1184-1187
 TOPIC TAGS: bacteria, genetics, antibiotic
 ABSTRACT: A new method was developed for producing mutants of Bacillus subtilis 168 with small colonies and a respiration defect, based on the mutagenic action of 5-fluorouracil. Most of the small mutants obtained were unstable, splitting out cells of the original form, with large colonies; however, stable mutants that did not revert to the original form after repeated reinoculations were obtained. Optimum 5-fluorouracil content for the induction of stable mutants: 250 micrograms per milliliter. Determinations of the respiratory quotient, studies of the effects of substances that selectively interfere with nucleic acid synthesis (mitomycin C, actinomycin C, tryptaflavin, degranol), protein synthesis (puromycin, tetracycline, chloramphenicol), and
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ACCESSION NR: AP5019329

the synthesis of the cellular membrane (penicillin), and investigations of the synthesis of the enzyme beta-galactosidase in the cells of these micro-organisms, indicated that B. subtilis mutants with an oxidation defect are characterized by refractoriness of the respiration to the effects of exogenous glucose, a selective sensitivity to the action of puromycin -- a specific inhibitor of the concluding stages of protein synthesis -- and a loss of the ability for the induction of beta-galactosidase. In view of these properties, the authors recommend such mutants as test objects for the search for new antibiotics that selectively suppress protein synthesis in the bacterial cell.

Orig. art. has: 3 tables.

ASSOCIATION: Institut po izyskaniyu novykh antibiotikov Akademii meditsinskikh nauk SSSR (Institute for the Search for New Antibiotics, Academy of Medical Sciences SSSR)

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JPRS

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IRIKOVA, N. P.

IRIKOVA, N. P.: "The method of successive approximations in mathematics and its use in the intermediate school." Academy of Pedagogical Sciences USSR. Sci Res Inst of Teaching Methods. Moscow, 1956.
(Dissertation for the Degree of Candidate in Pedagogical Sciences).

SO: Knizhna i letopis', No 33, 1956

NIKONOV, A.G.; YEVSEYEVA, V.I.; BIBIKOVA, P.D.; BICHUL', K.G.

Cultivation of *Vibrio comma* in the small intestine of guinea pigs.
Zhur. mikrobiol. epid. i imm. 29 no.12:51-53 D '58. (MIRA 12:1)

1. Iz Rostovskogo-na Donu nauchno-issledovatel'skogo protivochumnogo
instituta Ministerstva zdravookhraneniya SSSR.

(VIBRIO COMMA, cultures.

an isolated loops of guinea pig small intestine (Rus))

(INTESTINE, SMALL,

cultivation of *Vibrio comma* in isolated loops of intestine
from guinea pigs (Rus))

BIBIKOVA, T., kand.med.nauk

Treatment of rheumatism. Nauka i zhizn' 28 no.1:78 Ja '61.

(MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut revmatizma,
Moskva.

(Rheumatism)

BIBIKOVA, T. I.

USSR/Medicine - Sulfa Drugs
Catarrh, Acute

Aug 49

"Use of Sulfonamide for the Treatment of Acute Catarrh of the Respiratory Passages,"
F. G. Epshteyn, Z. A. Semashko, S. A. Semashko, T. I. Bibikova, Moscow, 1/2 p

"Sov Med" No 8

A group of 490 patients with acute catarrh of the respiratory passages was treated with sulfonamide preparations while a control group of 304 patients was treated with urotropine. Duration of febrile reactions, toxic and local catarrhal symptoms, and unfitness for work was approximately the same for both groups, but fewer complications occurred in the group receiving sulfonamide treatment.

PA 152T60

BIBIKOVA, T.I.; SIGIDIN, Ya.A.; MIKHAYLOVA, I.N.; KULESHOVA, Z.S.;
MILAYEVA, L.V.

Hormone and drug therapy in rheumatic carditis. Vop.revm. 1
no.2:33-39 Ap-Je '61. (MIRA 16:4)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta
revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.
Nesterov) Ministerstva zdravookhraneniya RSFSR.
(RHEUMATIC HEART DISEASE) (HORMONE THERAPY)
(CHEMOTHERAPY)

BIBIKOVA, T.I., kand.med.nauk; SIGIDIN, Ya.A.; KULESHOVA, Z.S.;
MILAYEVA, L.V.

Use of prednisolone in the combined treatment of rheumatic
fever. Terap.arkh. 33 no.2:11-18 F '61. (MIRA 14:3)

1. Iz klinicheskogo otdela Gosudarstvennogo nauchno-issledo-
vatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen
AMN SSSR prof. A.I. Nesterov) Ministerstva zdravookhraneniya
PSFSR.

(PREGNADIENEDIONE) (RHEUMATIC FEVER)

BIBIKOVA, T.I., kand.med.nauk; SIGIDIN, Ya.A., kand.med.nauk

Modern aspects of the treatment of rheumatic carditis. Vop.revm.
2 no.3:54-61 JL-S '62. (MIRA 16:2)

1. Izklinicheskogo otdela Nauchno-issledovatel'skogo instituta
revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.
Nesterov) AMN SSSR.

(RHEUMATIC HEART DISEASE)

S/188/60/000/02/02/006
B020/B054

AUTHOR: Bibikova, T. N.

TITLE: An Attempt of Observing Clouds by a Photographic Method
With the Aid of a Spherical Mirror

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 3, fizika,
astronomiya, 1960, No. 2, pp. 5 - 11

TEXT: The photographic method is one of the most suitable methods for a systematic study of the motion and extension of clouds. It provides a clear conception of the nature and changes of the cloud cover in various parts of the sky. In photographing with an ordinary movie camera, possibly with wide-angle lenses, only a small portion of the celestial vault appears on the picture. But often it is of importance to know the state of the whole celestial globe, particularly in quickly changing situations. For this purpose, a great number of pictures must be taken. It is, however, desirable to show the whole celestial vault in one single picture. The development in this field is briefly outlined, and A. I. Lebedinskiy is mentioned. Arx showed in his investigations in 1957

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An Attempt of Observing Clouds by a Photographic Method With the Aid of a Spherical Mirror

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that in photographing the celestial vault which is not larger than a hemisphere good pictures can be obtained by means of a spherical mirror. In 1957-1958, this method was used during an expedition of the kafedra fiziki atmosfery fizicheskogo fakul'teta (Chair of Physics of the Atmosphere of the Department of Physics) to the Crimea and the Caucasus. Fig. 1 shows a photograph of the celestial vault by means of a spherical mirror (taken on September 11, 1957, at 12.30 in the Caucasus). The use of this method is thoroughly described, and the methods of evaluating the photographs are indicated. Fig. 2 shows a total view of the camera, Fig. 3 the determination of the azimuth of individual cloud points, Fig. 4 a diagram of the dependence of the azimuth angle on the radius of the photograph (in radial fractions) for a mirror with a radius of curvature of 22 cm and a level of the camera of 1 m above the mirror, and Fig. 5 shows the determination of the area covered by clouds. From all this it follows that the photography of clouds by means of a spherical mirror is a relatively simple and suitable method. It supplies not only qualitative but also quantitative data on the position and shape of the cloud cover in the celestial vault. The ✓

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knowledge of the angular coordinates and the altitude of the cloud cover allows a quantitative evaluation of the shift of the cloud cover and its extension. This method is particularly advantageous for the observation of quickly moving clouds. It may also be of interest for the study of orographic clouds. On the basis of the coordinates of the cloud, the latter can be entered in a chart, and the time of its existence can be pursued. Thus, it is possible to determine the mountain peaks or ridges that influence the formation of clouds. There are 5 figures and 7 references: 3 Soviet and 4 British.

ASSOCIATION: Kafedra fiziki atmosfery (Chair of Physics of the Atmosphere) ✓

SUBMITTED: December 11, 1958

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